

RECLAMATION

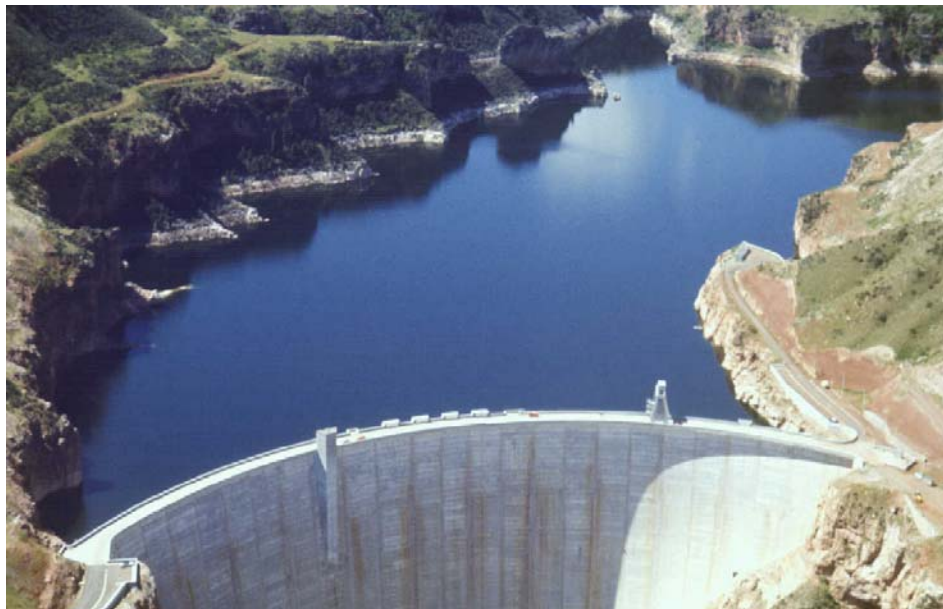
Managing Water in the West

December 1, 2008

Dear Customer:

Attached are the monthly water supply outlook and projected reservoir and river operating plans prepared in December 2008. Storage in Bighorn Lake on December 1 is at 106 percent of average and 1.75 feet lower than on November 1. Based on the most current streamflow accretions, accompanied by the planned releases out of Boysen and Buffalo Bill Reservoirs, the December inflow to Bighorn Lake is forecast at 97,900 acre-feet or 71 percent of average. If you have any questions or concerns, please feel free to call me at (406) 247-7318.

Tim H. Felchle
Reservoir and River Operations



U. S. Department of the Interior
Bureau of Reclamation
Montana Area Office
River and Reservoir Operations

YELLOWTAIL RESERVOIR OPERATIONS
 Water Supply Forecasts and Reservoir Operations
 December 1, 2008

Present Elevations & Storages:

<u>Reservoir</u>	<u>Elevation</u>	<u>Storage</u>	<u>Percent of Normal</u>
Boysen	4718.72	626,094	115
Buffalo Bill	5368.75	459,067	112
Bighorn Lake	3637.45	1,038,945	106

Actual Inflows (1,000 Acre-Feet):

<u>Month</u>	<u>Inflow</u>	<u>Percent of Normal</u>
October	138.7	76
November	95.8	63
December	66.3	48
January	66.3	50
February	68.0	50
March	86.1	51
April	80.9	50
May	291.6	118
June	595.1	144
July	330.6	114
August	129.6	81
September	184.6	107
April-July, 2008	1,298.3	117
WY-2008 Total	2,133.2	91
October	151.2	83
November	118.9	78

Actual Gains Between Boysen and Buffalo Bill to Yellowtail (1,000 Acre-Feet):

<u>Month</u>	<u>Gains</u>	<u>Percent of Normal</u>
October	92.9	118
November	63.2	98
December	32.3	71
January	32.2	69
February	36.0	63
March	52.2	68
April	20.7	45
May	120.4	143
June	179.7	118
July	29.4	535
August	-19.1	---
September	63.4	138
April-July, 2008	350.3	122
WY-2008 Total	702.8	100
October	70.3	90
November	51.2	79

December Runoff Forecast (1,000 Acre-Feet):

<u>Agency</u>	<u>Gains</u>	<u>Percent of Normal</u>
USBR	33.3	72
	<u>Inflows</u>	
USBR	97.9	71

Snowpack Conditions:

S N O W - P R E C I P I T A T I O N U P D A T E
 Based on Mountain Data from NRCS SNOTEL Sites
 As of MONDAY: DECEMBER 1, 2008

BASIN	ELEV.	SNOW WATER EQUIVALENT			TOTAL PRECIPITATION		
Data Site Name	(Ft)			%			%
		Current	Average	Avg	Current	Average	Avg

UPPER YELLOWSTONE RIVER BASIN

BEARTOOTH LAKE	9360	4.4	7.0	63	4.2	5.9	71
BOX CANYON	6670	1.6	2.2	73	3.3	3.8	87
BRACKETT CREEK	7320	3.9	4.9	80	10.2	7.3	140
BURNT MTN	5880	.1	1.3	8	5.5	5.5	100
CANYON	7870	2.1	3.2	66	3.4	4.8	71
COLE CREEK	7850	3.7	5.4	69	5.7	5.9	97
EVENING STAR	9200	5.0	8.5	59	7.1	8.2	87
FISHER CREEK	9100	6.7	9.1	74	7.6	9.8	78
MONUMENT PEAK	8850	5.1	5.8	88	6.0	6.4	94
NORTHEAST ENTRANCE	7350	.4	2.5	16	3.6	4.0	90
PARKER PEAK	9400	6.0	6.7	90	4.6	5.5	84
PLACER BASIN	8830	6.2	5.6	111	7.6	6.5	117
PORCUPINE	6500	.3	1.3	23	3.8	4.0	95
SACAJAWEA	6550	.9	1.9	47	10.8	6.6	164
SHOWER FALLS	8100	6.4	6.3	102	7.7	7.7	100
S FORK SHIELDS	8100	4.0	4.5	89	6.9	6.3	110
SYLVAN LAKE	8420	3.8	6.4	59	5.8	7.1	82
SYLVAN ROAD	7120	2.1	3.5	60	4.2	6.6	64
THUMB DIVIDE	7980	2.7	4.0	68	5.7	5.4	106
TWO OCEAN PLATEAU	9240	8.4	8.3	101	6.4	8.2	78
WHITE MILL	8700	4.9	6.6	74	5.8	7.7	75
WOLVERINE	7650	.4	3.0	13	2.7	4.5	60
YOUNTS PEAK	8350	4.0	4.7	85	4.4	5.2	85

Basin wide percent of average

74

93

WIND RIVER BASIN (WYOMING)

BURROUGHS CREEK	8750	3.8	3.8	100	4.5	4.9	92
COLD SPRINGS	9630	2.0	3.1	65	3.5	4.2	83
DEER PARK	9700	3.1	4.5	69	4.8	7.1	68
HOBBS PARK	10100	3.3	5.3	62	3.8	4.6	83
KIRWIN	9550	3.4	4.2	81	3.7	4.1	90
LITTLE WARM	9370	2.9	3.4	85	4.2	4.6	91
OWL CREEK	8975	2.5	1.9	132	2.6	2.2	118
SOUTH PASS	9040	2.6	4.9	53	5.0	6.0	83
ST. LAWRENCE ALT	8620	.5	2.7	19	2.7	3.5	77
TOGWOTEE PASS	9580	7.3	7.0	104	8.4	7.3	115
TOWNSEND CREEK	8700	1.9	3.0	63	3.8	4.5	84
YOUNTS PEAK	8350	4.0	4.7	85	4.4	5.2	85

Basin wide percent of average

77

88

SHOSHONE RIVER BASIN (WYOMING)

BLACKWATER	9780	5.3	7.8	68	5.0	7.2	69
EVENING STAR	9200	5.0	8.5	59	7.1	8.2	87
MARQUETTE	8760	1.4	3.8	37	2.9	4.1	71
SYLVAN LAKE	8420	3.8	6.4	59	5.8	7.1	82
SYLVAN ROAD	7120	2.1	3.5	60	4.2	6.6	64
YOUNTS PEAK	8350	4.0	4.7	85	4.4	5.2	85

Basin wide percent of average

62

77

BIGHORN RIVER BASIN (WYOMING)

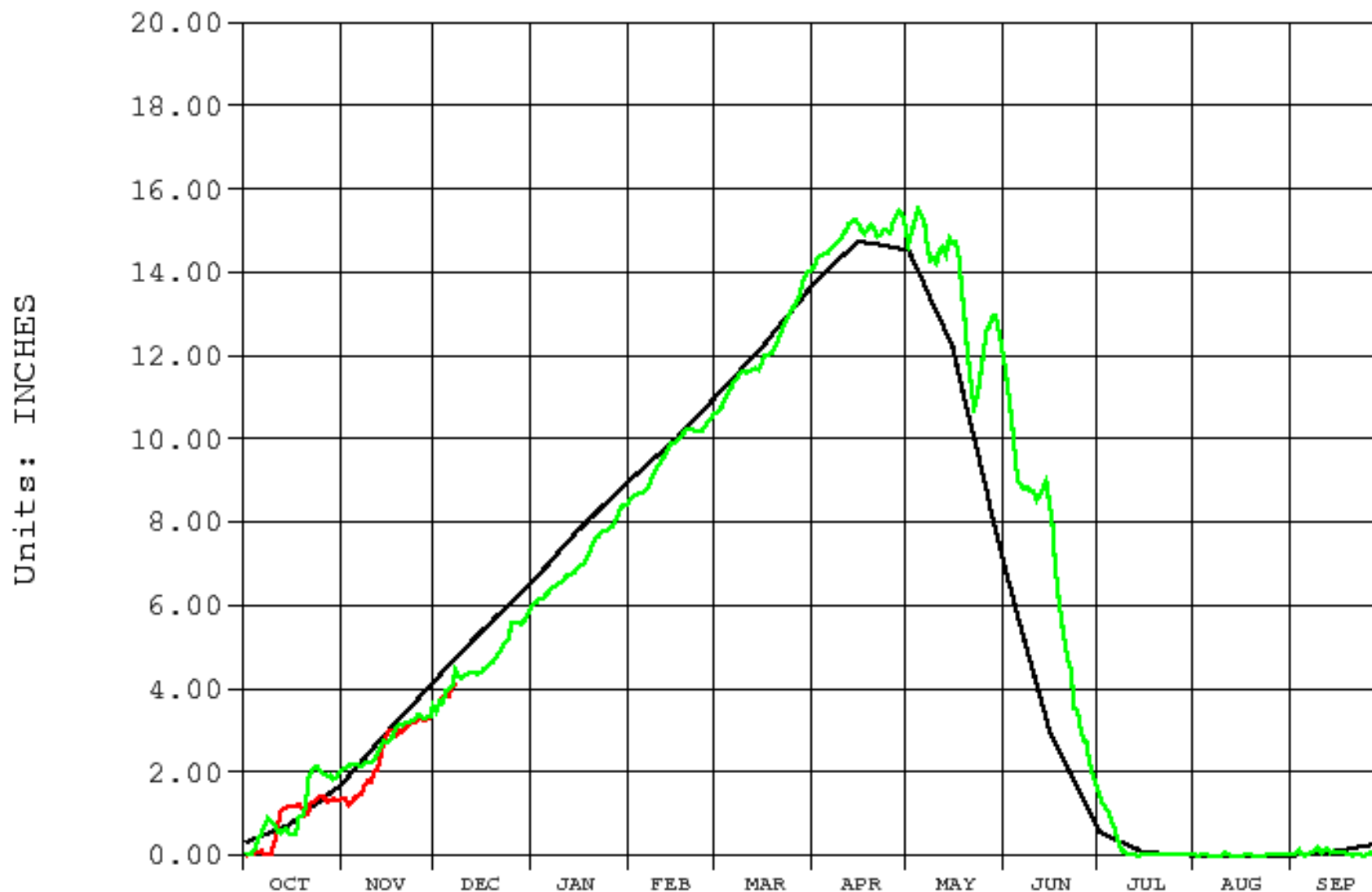
BALD MTN.	9380	7.1	5.9	120	6.4	5.3	121
BEAR TRAP MEADOW	8200	1.3	1.6	81	2.9	3.4	85
BLACKWATER	9780	5.3	7.8	68	5.0	7.2	69
BONE SPRINGS DIV	9350	6.2	5.3	117	5.6	4.9	114
EVENING STAR	9200	5.0	8.5	59	7.1	8.2	87
GRAVE SPRINGS	8550	1.3	2.7	48	3.1	3.6	86
KIRWIN	9550	3.4	4.2	81	3.7	4.1	90
MARQUETTE	8760	1.4	3.8	37	2.9	4.1	71
MIDDLE POWDER	7760	1.1	3.5	31	3.1	4.9	63
OWL CREEK	8975	2.5	1.9	132	2.6	2.2	118
POWDER RIVER PASS	9480	3.5	3.3	106	4.5	4.1	110
SHELL CREEK	9580	5.9	5.1	116	6.0	4.5	133
SYLVAN LAKE	8420	3.8	6.4	59	5.8	7.1	82
SYLVAN ROAD	7120	2.1	3.5	60	4.2	6.6	64
TIMBER CREEK	7950	1.4	2.3	61	3.9	3.0	130
YOUNTS PEAK	8350	4.0	4.7	85	4.4	5.2	85

Basin wide percent of average

78

91

Archive Data From 1-OCT Through 30-SEP
Plotted 12/07/2008 13:30



BHR Bighorn Lake (Yellowtail), Bighorn River near Fort Smith, MT

SE_AVG Snow Water Equivalent Average (inches)

2009

SE Snow Water Equivalent (inches)

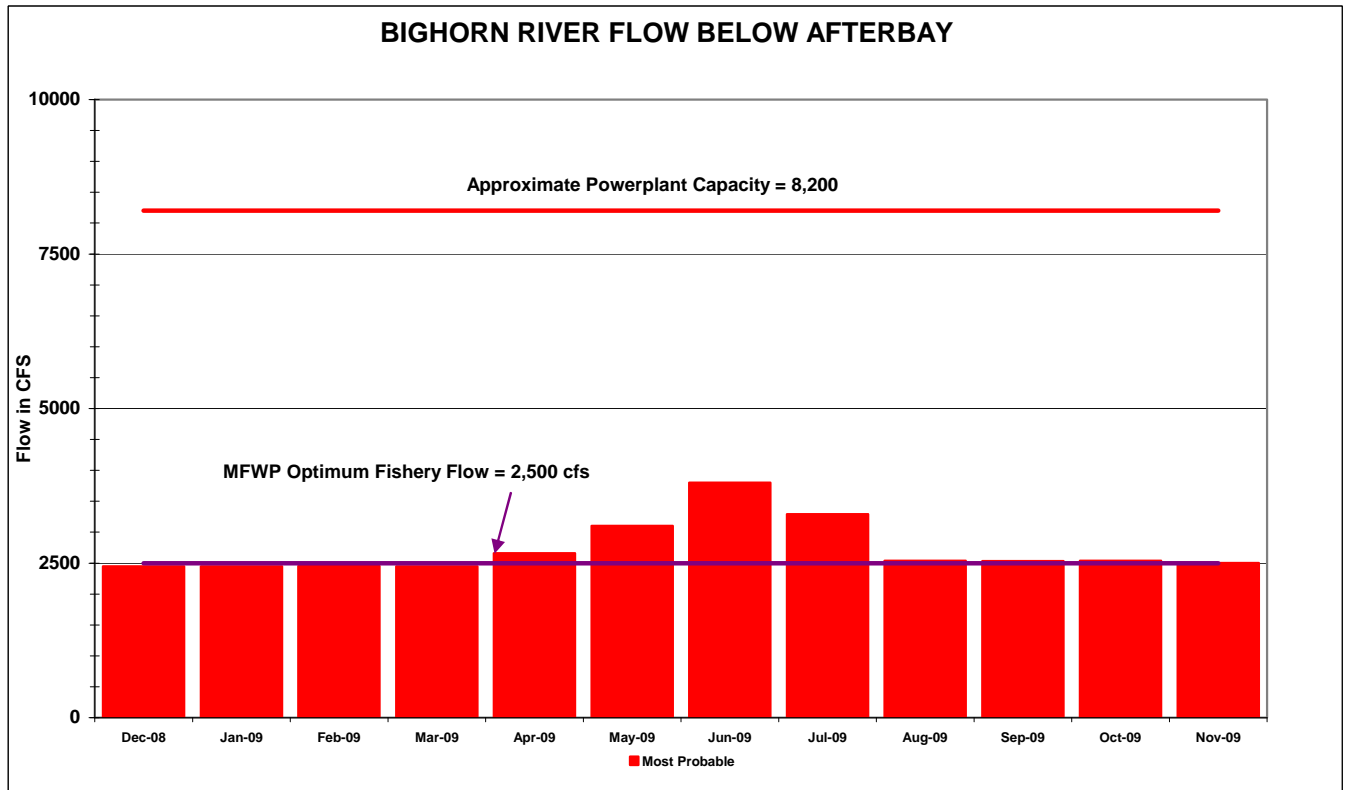
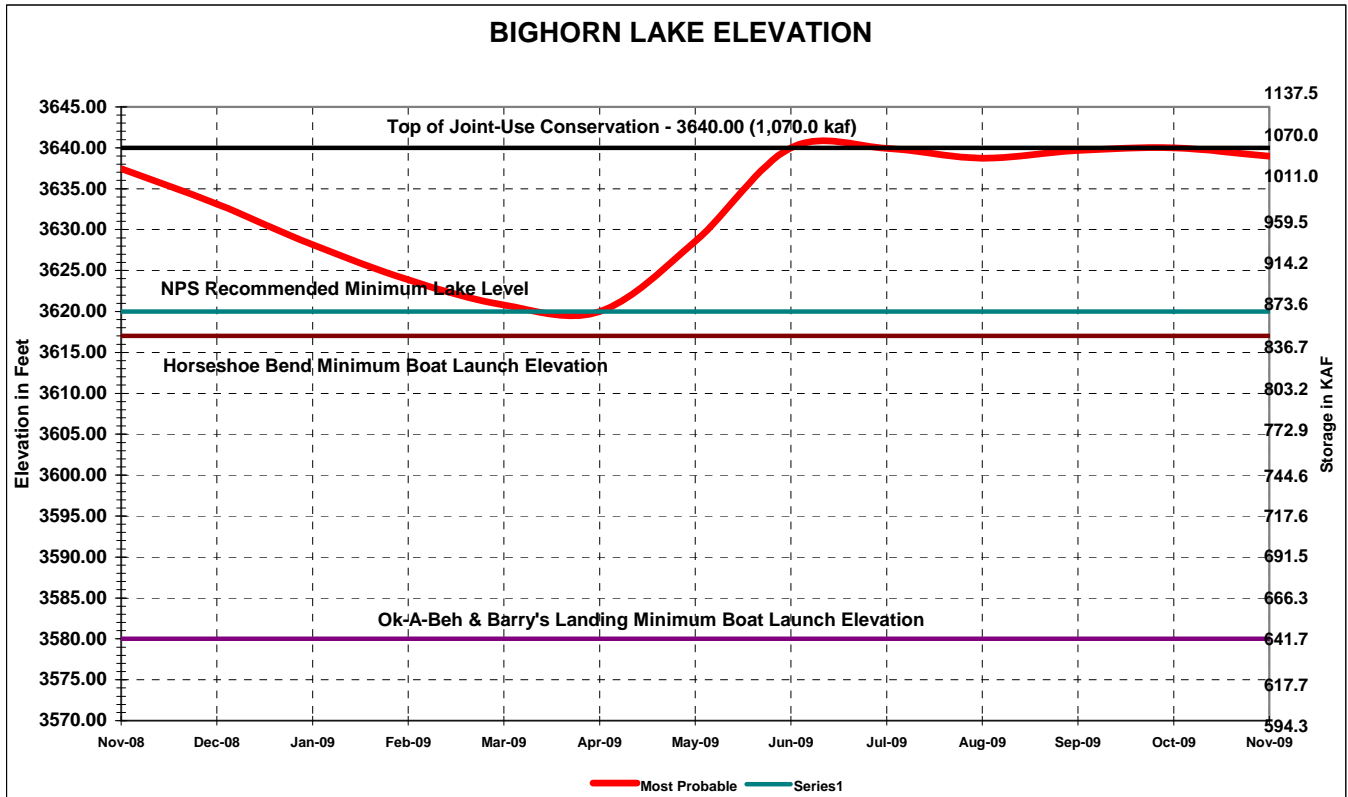
2009 2008

BHXAOP V1.12 Run: 07-Dec-2008 13:04
 Based on Most Probable Inflow Forecast

BIGHORN LAKE MONTHLY OPERATIONS

Bighorn Reservoir		Initial Cont 1039.3 kaf Elev 3637.48 ft				Maximum Cont 1328.4 kaf Elev 3657.00 ft				Minimum Cont 493.6 kaf Elev 3547.00 ft				Total
	2008	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Boysen Release	kaf	43.1	43.1	38.9	43.0	82.1	139.0	129.7	126.1	86.3	59.5	61.5	59.5	911.8
Boysen Release	cfs	701	701	700	699	1380	2261	2180	2051	1404	1000	1000	1000	
Buffalo Bill Riv Flo	kaf	21.5	21.5	19.4	21.5	24.4	78.8	141.2	114.0	80.9	78.2	24.9	20.8	647.1
Buffalo Bill Riv Flo	cfs	350	350	349	350	410	1282	2373	1854	1316	1314	405	350	
Station Gain	kaf	33.3	33.0	36.5	56.8	42.0	65.5	102.0	-15.3	-3.4	39.5	73.4	51.3	514.6
Monthly Inflow	kaf	97.9	97.6	94.8	121.3	148.5	283.3	372.9	224.8	163.8	177.2	159.8	131.6	2073.5
Monthly Inflow	cfs	1592	1587	1707	1973	2496	4607	6267	3656	2664	2978	2599	2212	
Turbine Release	kaf	146.3	146.3	132.2	146.3	154.7	211.0	248.8	225.8	178.5	165.5	155.8	144.6	2055.8
Bypass/Spill/Waste	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	146.3	146.3	132.2	146.3	154.7	211.0	248.8	225.8	178.5	165.5	155.8	144.6	2055.8
Total Release	cfs	2379	2379	2380	2379	2600	3432	4181	3672	2903	2781	2534	2430	
Spring Flow	kaf	4.3	4.3	3.9	4.3	4.2	4.3	4.2	4.3	4.3	4.2	4.3	4.2	50.8
Irrigation Reqmnt	kaf	0.0	0.0	0.0	0.0	0.6	24.6	26.8	27.7	26.8	18.8	4.1	0.0	129.4
Afterbay Rels	kaf	150.6	150.6	136.1	150.6	158.9	215.3	253.0	230.1	182.8	169.7	160.1	148.8	2106.6
Afterbay Rels	cfs	2449	2449	2451	2449	2670	3502	4252	3742	2973	2852	2604	2501	
River Release	kaf	150.6	150.6	136.1	150.6	158.3	190.7	226.2	202.4	156.0	150.9	156.0	148.8	1977.2
River Release	cfs	2449	2449	2451	2449	2660	3101	3801	3292	2537	2536	2537	2501	
Min Release	kaf	150.6	150.6	136.1	150.6	148.8	153.7	148.8	153.7	153.7	148.8	153.7	148.8	1797.9
End-Month Targets	kaf					873.6		1070.0				1070.0		
End-Month Content	kaf	990.9	942.2	904.8	879.8	873.6	945.9	1070.0	1069.0	1054.3	1066.0	1070.0	1057.0	
End-Month Elevation	ft	3633.12	3628.16	3623.89	3620.80	3620.00	3628.56	3640.00	3639.92	3638.73	3639.68	3640.00	3638.95	
Net Change Content	kaf	-48.4	-48.7	-37.4	-25.0	-6.2	72.3	124.1	-1.0	-14.7	11.7	4.0	-13.0	17.7
Yellowtail Power	2008	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total
Turbine Release	kaf	146.3	146.3	132.2	146.3	154.7	211.0	248.8	225.8	178.5	165.5	155.8	144.6	2055.8
Generation	gwh	59.007	58.110	51.767	56.676	59.600	82.236	100.127	92.571	73.011	67.664	63.845	59.177	823.791
End-Month Power Cap	mw	280.7	275.9	271.8	269.0	268.2	276.3	287.5	287.4	286.2	287.2	287.5	286.5	
% Max Gen		28	27	27	26	29	38	48	43	34	33	30	29	
Ave kwh/af		403	397	392	387	385	390	402	410	409	409	410	409	401
Upstream Generation	gwh	9.492	9.467	7.624	8.908	14.413	34.101	33.970	34.715	31.169	27.819	13.346	10.923	235.947
Total Generation	gwh	68.499	67.577	59.391	65.584	74.013	116.337	134.097	127.286	104.180	95.483	77.191	70.100	1059.738

BIGHORN LAKE



WATER YEAR 2009